

REMARKS

Applicant is in receipt of the Office Action mailed July 27, 2009. Claims 31-48 were pending in the application, and were rejected. Claims 31, 37 and 43 have been amended. Claims 32-35, 38-41 and 44-47 have been canceled. New claims 49-57 have been added. Reconsideration of the case is earnestly requested in light of the following remarks.

Section 103 Rejection

Claims 31-48 were rejected under 35 U.S.C. 103(a) as being unpatentable over various combinations of Suginoshita et al., U.S. Patent Application Pub. No. 2001/0018692 (hereinafter “Suginoshita”); Britton et al., U.S. Patent Application Pub. No. 2002/0174126; Adrangi, U.S. Patent Application Pub. No. 2002/0087797 (hereinafter “Adrangi”); and Spiegel, U.S. Patent No. 6,954,765 (hereinafter “Spiegel”). Applicant respectfully submits that the cited references do not teach the combination of limitations recited in the amended claims.

The amended claim 31 recites that the program instructions are executable by the one or more processors to store respective history information for each respective data portion of the plurality of data portions of the replica, where the respective history information for each respective data portion of the replica indicates previous accesses to the respective data portion of the replica. The program instructions are further executable to receive a write request specifying particular data to write to a particular data portion of the replica of the data object, and analyze the respective history information for the particular data portion of the replica of the data object in response to the write request in order to determine whether the particular data portion was accessed more than a threshold number of times within a particular time period. Applicant respectfully submits that the cited art does not teach a replica of a data object which includes a plurality of different data portions, where different respective history information is stored for each of the data portions of the replica of the data object, and when a write request is received specifying data to be written to a particular one of the data portions, the respective history information for that particular data portion is analyzed in order to determine whether the particular data portion was accessed more than the threshold number of times within the particular time period.

The amended claim 31 further recites that the program instructions are executable by the one or more processors to perform the following in response to the write request:

select to either: 1) write the particular data specified by the write request to the particular data portion of the replica of the data object in order to update the particular data portion if the particular data portion was accessed more than the threshold number of times within the particular time period, or to 2) mark the particular data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the particular data portion was not accessed more than the threshold number of times within the particular time period.

Most conventional systems fulfill write requests by simply writing the data specified by the write requests. For example, the Suginoshita reference teaches a system in which data is written in response to a write request. In the claimed invention of claim 31 however, the program instructions are executable by the one or more processors to select to perform one of two things in response to the write request. If the particular data portion was accessed more than the threshold number of times within the particular time period then the particular data specified by the write request is written to the particular data portion of the replica of the data object in order to update the particular data portion. On the other hand, if the particular data portion was not accessed more than the threshold number of times within the particular time period then the particular data portion of the replica is marked as stale without marking other data portions of the plurality of data portions of the replica as stale. Thus, a selection is made as to whether to perform the write request or to mark the particular data portion of the replica as stale. The selection is made based on whether or not the respective history information for the particular data portion of the replica indicates that the particular data portion was accessed more than the threshold number of times within the particular time period.

Applicant respectfully submits that the cited art does not teach these features. As noted above, the Suginoshita reference merely teaches a system in which data is written in response to a write request. Suginoshita does not teach any type of selection or decision between different operations to perform in response to the write request. The write request is simply performed. Applicant respectfully submits that the other cited references also fail to teach this feature. With respect to marking data as stale, the Office Action cites the Britton reference. Britton teaches that data retrieved from a database may have an expiration. After the expiration the data may be marked as stale. Britton does not teach marking a portion of data as stale in response to a write request specifying particular data to be written to the portion of data. Likewise, Britton does not

teach a selection or decision between either writing to the portion of data or marking the portion of data as stale.

Applicant thus respectfully submits that the amended claim 31 is patentably distinct over the cited art for at least the reasons set forth above. Inasmuch as the other independent claims 37 and 43 recite similar limitations as amended claim 1, Applicant respectfully submits that these claims are also patentably distinct over the cited art. Since the independent claims have been shown to be patentably distinct, Applicant respectfully submits that the dependent claims are also patentably distinct for at least this reason.

In light of the foregoing amendments and remarks, Applicants submit that all pending claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. If a phone interview would speed allowance of any pending claims, such is requested at the Examiner's convenience.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 50-1505/5760-18800.

Respectfully submitted,

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Date: October 27, 2009